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(54) **TABLETTABLE CHEWING GUMS**

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See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

3,845,217	A	10/1974	Ferno	
6,280,761	B1	8/2001	Santus	
6,344,222	B1	2/2002	Cherukuri et al.	
6,358,060	B2	3/2002	Pinney	
6,893,654	B2	5/2005	Pinney	
2002/0098264	A1	7/2002	Cherukuri et al.	
2002/0164398	A1	11/2002	Johnson et al.	
2004/0194793	A1	10/2004	Lindell et al.	
2005/0053665	A1*	3/2005	Ek et al.	424/488
2005/0175733	A1*	8/2005	Thorengaard et al.	426/3
2006/0263476	A1*	11/2006	Jani et al.	426/3
2008/0020050	A1	1/2008	Chau	
2010/0061940	A1*	3/2010	Axelsson et al.	424/48

FOREIGN PATENT DOCUMENTS

WO	WO01/89476	11/2001
WO	WO02/102357	12/2002
WO	WO2004/110492	12/2004
WO	WO2005/023227	3/2005
WO	WO2007/104574	9/2007
WO	WO 2007104574 A2 *	9/2007

OTHER PUBLICATIONS

SPI Pharma, Effer-Soda, 2007, www.spipharma.com/default.asp?contentID=592, pp. 1-2.*
EP2293786 opposition Fertin Pharma A/S against Novartis AG.
Exhibit D4 from EP2293786 opposition SPI Brochure.
Exhibit D6 from EP2293786 opposition Nicorette composition (BIAM fr).
Exhibit D8 from EP2293786 opposition Extract from "Formulation and Production of Chewing and Bubble Gum".

* cited by examiner

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(57) **ABSTRACT**

The invention relates to certain nicotine chewing gums that provide for a high rate of buccal absorption and high plasma concentrations, in particular over the first 10 minutes after administration, in a subject willing to quit smoking.

31 Claims, No Drawings